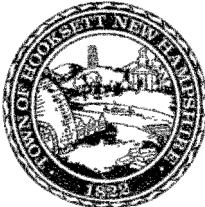


Hooksett Fire –Rescue Department Specifications for Stainless Steel Pumper Tanker	Bid # 11-05	Bidder Complies
		Yes
		No

Town of Hooksett



Fire –Rescue Department
Chief Michael Williams
August 18, 2011

REQUEST FOR PROPOSAL FIRE APPARATUS

Introduction

The Town of Hooksett NH seeks proposals from qualified Fire apparatus vendors for a new International Model 7600 6x4 Stainless Steel Pumper Tanker. Attached are the items that shall be included in the unit as well as vehicle specifications.

If any exception is taken, you shall submit your exception and how you plan on meeting the intent of the item on a separate sheet outline "Specification exceptions, page 44".

All proposals shall be labeled "Bid #11-05 Fire Apparatus" and submitted to:

Town Administrator
35 Main Street
Hooksett, NH 03106

All bids shall be submitted by Noon on September 8, 2011. The Town of Hooksett reserves the right to reject any and all bids submitted, and to waive technical or legal deficiencies, and to accept any bid that it may deem to be in the best interest of the Town of Hooksett.

A public bid opening will be held on September 8, 2011 at 12:00 noon at the Hooksett Town Hall.

Inquires

Inquiries pertaining to the Request for Proposal must cite the RFP title and acceptance date can be directed to the Fire Chief, telephone (603) 623-7272

A preconstruction meeting shall be held at the Hooksett Safety Center after the bid is awarded, time and date to be determined by Hooksett Fire Rescue.

Bidders are requested to read the complete bid invitation carefully and submit their proposals in strict accordance with the requirements set forth.

Hooksett Fire –Rescue Department Specifications for Stainless Steel Pumper Tanker Bid # 11-05			Bidder Complies
Yes	No		

It is the Town's intent that this RFP shall permit competition. It shall be the respondent's responsibility to advise the Coordinator in writing if any language, requirement, specification, etc., or any combination thereof, inadvertently restricts or limits the requirements stated in this RFP to a single source. Such notification must be received not later than ten (10) days prior to the proposal acceptance date.

Background

The Town of Hooksett is home to an estimated 14,000 residents and is located in south-central New Hampshire. Hooksett Fire-Rescue is a combination fire department responding to over 2,000 calls for service annually operating on an annual fire department operating budget of over 3 million dollars.

Submission Requirements

Pricing must be inclusive, clear, and concise, including such other information as requested. The proposal should address all the points outlined in the request for proposals. The proposal should be prepared simply and economically, providing a straightforward, concise description of the firm's capabilities to satisfy the requirements of the request for proposals. While additional data may be presented, the following subjects and questions must be addressed:

- Name, address, telephone number, fax number and e-mail address of the company.
- Name of contact person and telephone number for purposes of following up on proposal.
- Narrative including the qualifications of the company and municipal experience.
- Has the company been in bankruptcy, reorganization or receivership in the last five years? If so please explain current status.
- Has the company been disqualified or terminated by any public agency or Town? If so please explain under what circumstances this disqualification or termination occurred.

EACH BIDDER SHALL PROVIDE THEIR WARRANTIES

The following shall be considered minimum

Water tank: Life time of ownership

Structural: 10 years from in service date

Stainless pipe: 10 years from in service date

Paint: 10 years from in service date

DETAILED DRAWINGS REQUIRED

The bidder shall submit two (2) copies of a D-size (full size) engineered construction drawings with its bid. No bids will be considered without complete engineered construction drawings submitted with the bid. Submitted drawings must be specifically for the proposed apparatus and depict all major specified components.

These drawings shall show the following minimum views: front view; street side with proposed chassis; curbside with proposed chassis; rear view; top view with proposed chassis; hose bed height, and approach and departure angle.

The drawings shall contain the dimensions for the overall length (in feet and inches), overall height (in feet and inches), wheelbase, angle of approach, angle of departure, overall width of

Hooksett Fire –Rescue Department
Specifications for Stainless Steel Pumper Tanker Bid # 11-05

**Bidder
Complies**

Yes	No
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the apparatus, hose bed volume dimensions indicating the hosebed width, length, and height.

Submission of "similar to" or "standard" drawings, or statements referencing submission of drawings after award of contract, will disqualify the bid.
 No exceptions will be permitted to this section of the document.

SUBMISSION OF BID REQUIREMENTS

Bids shall be submitted in accordance with the following instructions:

1. The bid form provided herein shall be completed and returned with the appropriate "yes" or "no" marked by each paragraph in the "Bidder Complies" column. A paragraph indicated with both the "yes" and "no" column marked shall be considered non-responsive and treated accordingly.
2. Each bidder shall submit their own proposal specifications, detailing their construction. This is necessary to evaluate each bidder's actual intent of building the equipment as specified herein. The bidder's proposal format shall be the same order as these specifications to allow the Fire Department to compare all bids easily and prevent confusion. Failure to comply shall be cause for rejection of the bid.
3. Each bid shall include the weight ratings, wheelbase, principal dimensions, transmission and axle ratios, and a certified brake horsepower curve showing the maximum no load governed speed of the engine proposed.
4. Failure to submit detailed information or drawings where specified herein shall result in rejection of the bid.
5. Bids shall be returned in a sealed envelope clearly marked "BID FOR FIRE APPARATUS". Facsimile bids are not acceptable.
6. Verbal bids and changes in the bid price after the bid opening prior to award shall not be allowed. Any such attempt shall not be accepted and cause immediate rejection of the entire bid.
7. Three copies of this proposal is to be submitted.

Trade in Vehicle

The Town of Hooksett is looking at trading in our current Pumper Tanker; see the attached specification sheet on page 43. Please document your trade in value for this vehicle on the attached "bid form on page 42". Any and all trade in bids may be accepted or rejected by the town

Reservation of Rights

The Town of Hooksett reserves the right to reject all or any part of any or all proposals, to waive technical or legal deficiencies, and to accept any proposal that it deems to be in the best interest of Town.

Hooksett Fire –Rescue Department Specifications for Stainless Steel Pumper Tanker Bid # 11-05		Bidder Complies
Yes	No	

Firm Pricing

Proposed fees must be firm for Town acceptance for 365 days from acceptance date of proposals.

INTENT OF SPECIFICATIONS

It is the intent of these specifications to cover the furnishing and delivery to the Hooksett Fire Department a completed fire apparatus equipped as hereafter specified. With a view to obtaining the best results and the most acceptable fire apparatus for service in the Town of Hooksett, these specifications cover only the general requirements as to the type of construction and test to which the vehicle must conform, together with certain details as to finish, equipment, and appliances with which the successful bidder must conform. Details of construction and materials where not otherwise specified are left to the discretion of the contractor, who shall be solely responsible for the design and construction of all non-specified features. The completed vehicle shall conform to the requirements of the National Fire Protection Association Pamphlet No. 1901, latest edition, for Motor Fire Apparatus, and shall exceed 1901 where specified herein for all applicable equipment noted.

When evaluating bids, the importance of reduced life cycle costs and public safety associated with firefighting apparatus shall be a major consideration and all evaluations shall exclude vehicles of a type that deviate from these specifications.

The workmanship must be of the highest quality in its respective field. Special consideration shall be given to the following points:

- 1) Accessibility of the various components which require periodic maintenance or lube checks.
- 2) Ease of vehicle operation.
- 3) Visibility of the driver.
- 4) Features supplied that are beneficial to the intended operation of the completed apparatus.

Construction must be rugged and design must be certified to carry the loads as specified and to meet the road requirements and speed conditions as set forth under "Performance Test and Requirements".

Welding shall not be employed in the assembly of the completed vehicle in a manner that shall prevent the removal of a major component part for service and/or repair.

These specifications have not been established to preclude any bidders. However, the Hooksett Fire Department does not intend to make a decision solely based upon lowest price but intends to purchase an apparatus that meets the intentions, service, and needs of the Fire Department.

PURCHASE INTENT

The apparatus being purchased is expected to have a 20 year service life. Based on this requirement, the department is extremely concerned that the apparatus remains structurally

Hooksett Fire –Rescue Department
Specifications for Stainless Steel Pumper Tanker Bid # 11-05

**Bidder
Complies**

Yes	No

sound and the outward appearance remains in a "like new" condition, with minimal maintenance and upkeep, throughout the service life of the apparatus. Aluminum apparatus bodies and differing construction designs will be reviewed and considered only if the builder / manufacturer will meet the same "Body Structural Warranty" requirements specified in this bid document. Regardless of materials used or design, the entire body design shall be of a bolted design to allow for ease of removal for repair or replacement, without cutting welds.

ROAD TEST CERTIFICATION

A road test shall be conducted with the finished apparatus fully loaded. During this time, the apparatus shall not show loss of power and/or overheating. The transmission driveshaft or shafts and rear axle shall run free from abnormal vibration or noise throughout the operating range of the apparatus. The apparatus, when loaded, shall have not less than 25% or more than 45% of the weight on the front axle and not less than 55% or more than 75% on the rear axle.

- A. The apparatus must be capable of accelerating to 35 mph from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed RPM of the engine.
- B. The apparatus must be capable of accelerating from a steady speed of 15 mph to a true speed of 35 mph within 30 seconds. This shall be accomplished without moving the gear selector.
- C. The fully loaded apparatus shall be capable of obtaining a speed of 50 to 55 mph on a level concrete highway.
- D. The manufacturer shall furnish copies of the engine installation approvals signed by the appropriate engine company upon delivery of the chassis to the Fire Department. No exceptions will be permitted to this section of the document.
- E. The manufacturer shall furnish copies of the transmission approval signed by the transmission manufacturer upon delivery of the chassis to the Fire Department. No exceptions will be permitted to this section of the document.
- F. The manufacturer shall furnish copies of the front and rear axle approvals upon delivery of the chassis to the Fire Department. No exceptions will be permitted to this section of the document.

ROAD TEST FAILURE

In the event the apparatus fails to meet the test requirements of these specifications on the first trials, second trials may be made at the option of the manufacturer within thirty (30) days of the first trials. Such trials shall be final and conclusive and failure to comply with changes as the Hooksett Fire Department may consider necessary to conform to any clause of the specifications within thirty (30) days after notice is given to the manufacturer of such changes, shall also be cause for rejection of the apparatus. Permission to keep or store the apparatus in any building owned or occupied by the Hooksett Fire Department, or its use by the Fire Department during the above specified period with permission of the manufacturer, shall not constitute acceptance.

Hooksett Fire –Rescue Department
Specifications for Stainless Steel Pumper Tanker Bid # 11-05

**Bidder
Complies**

Yes	No
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LIABILITY

The bidder, if his bid is accepted, shall defend any and all suits and assume all liability for use of any patented process, device, or article forming a part of the completed vehicle or any appliance under the contract.

INSPECTION TRIP

One (1) inspection trip for up to three (3) Fire Department personnel shall be made to the manufacturer's facility during the course of construction of the apparatus. Air travel (for distances over 250 miles), meals, and lodging expenses shall be paid for by the successful bidder.

APPARATUS FAMILIARIZATION

Fire Department personnel shall be instructed as to the use of the entire apparatus including, but not limited to, chassis, fire pump system, the apparatus, and supplied equipment.

The familiarization specialist shall remain at the Fire Department for four (4) days (not less than eight (8) hours), to provide instruction to all personnel, or as instructed by Chief of the Department. All meals, motel, and travel costs shall be the responsibility of the successful bidder.

DELIVERY DATA REQUIREMENTS

Delivery of the completed vehicle shall be the responsibility of the successful bidder, no more than two-hundred forty (240) calendar days after acceptance of the formal contract by the successful bidder.

The manufacturer shall specify in his bid the number of calendar days after acceptance of the formal contract by the manufacturer that the completed vehicle shall be delivered to the Hooksett Fire Department.

Information required at time of delivery to be supplied by the manufacturer:

- A. Line set ticket showing parts used by the manufacturer in construction of the cab and chassis.
- B. Electrical "as built" schematic booklet.
- C. Air system "as built" schematic booklet.
- D. Final build data sheet showing serial numbers for the following:
 - 1) Cab and chassis Vehicle Identification Number
 - 2) Engine
 - 3) Transmission
 - 4) Front axle
 - 5) Rear axle(s)
 - 6) Each tire showing mounting location on the chassis.
 - 7) Apparatus Serial Numbers

Hooksett Fire –Rescue Department
Specifications for Stainless Steel Pumper Tanker Bid # 11-05

**Bidder
Complies**

Yes	No
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- E. Final build measurement data sheet showing the following:
- 1) Bumper extension
 - 2) Wheelbase
 - 3) Rear overhang
 - 4) Cab measurements from the ground to the bottom of the cab at all four corners and the frame to cab extreme at the frame height for all four corners of the cab.
 - 5) Suspension measurements from the ground to the top of the frame at the centerline of the front axle and the centerline of the rear axle or centerline of the tandem axles.
 - 6) Overall Height, Length, and Width of completed body.
- F. Unless otherwise specified, a minimum of one (1) copy of complete, as delivered apparatus and chassis operation and general maintenance instructions including, but not limited to the chassis, engine, transmission, axles, and lubrication charts shall be supplied.

Minimum warranty requirements

BASE APPARATUS WARRANTY

The manufacturer shall warranty the apparatus proposed, manufactured and/or assembled to be free from defects in material and workmanship under normal use and service for a period of one (1) year from date of delivery to the Fire Department.

CAB AND CHASSIS WARRANTY

The commercial cab & chassis and their respective components are warranted by the chassis manufacturer.

WATER TANK WARRANTY

The water tank is to be free from defects in material and workmanship for the normal service life of the apparatus

STAINLESS PIPING WARRANTY

The bidder shall warrant that all stainless steel plumbing components used in the construction of the fire apparatus water/foam plumbing systems against defects and workmanship for a period of ten years from the date of delivery to the Hooksett Fire Department.

10 YEAR BODY LIMITED WARRANTY

The bidder, shall warrant the body, will remain free from corrosion and structural defects for a period of ten (10) years from the date that the vehicle was first placed in service.

TREATMENT OF BID EXCEPTIONS

It shall be mandatory for any prospective bidder that deviates from the proposed specifications to give a full description of all deviations.

When the bidder checks the "yes" column in the bid, the bidder is making testimony that the bidder is in full compliance with the entire paragraph.

Hooksett Fire –Rescue Department
Specifications for Stainless Steel Pumper Tanker Bid # 11-05

**Bidder
Complies**

Yes	No
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Where bidder's specifications and/or construction differ in any way from the bid specification, a full and complete description in specification shall be required. Drawings shall also be required to show alternative construction methods. Partial descriptions, or general clarifications covering groups of sections of the specification, shall be unacceptable and shall be cause for complete rejection of the bid.

Proposals taking total exception to the purchase specifications contained herein shall not be accepted and the bidder's proposal shall be deemed non-responsive and treated accordingly.

BID CLARIFICATIONS

Each clarification shall refer to the bid specification page number and paragraph. Any such clarification that appears vague or misleading shall be considered an exception. Complete clarifications are required describing the reason for the deviation. The completed vehicle shall be inspected upon delivery for compliance with specifications. Deviations shall not be tolerated and shall be cause for rejection of the entire apparatus unless they were originally listed in the bidder's proposal.

BID DOCUMENTS REQUIRED

The bidder shall utilize this document in its bid. The bidder shall indicate opposite each item if they comply with that paragraph by checking "yes" or "no", If no is indicated please explain your exception on the specification exceptions.

The bidder shall provide detailed information on the materials to be used to construct all parts of the apparatus. A bidder's use of terms such as "intent" are considered vague and unacceptable responses will disqualify the bid.

Copies of the bid document electronically reproduced used as a response specification are grounds for immediate disqualification of the bidder's submission.

No exceptions will be permitted to this section of the document.

CONTRACT AWARD

The contract shall be awarded to the best bidder meeting these specifications. Since the complete vehicle materials specified are commercially available, these specifications shall in no way be considered proprietary. Each bidder shall submit on his proposal page a single line item price for all items listed in the specifications. Price shall be based on payment upon receipt of the accepted complete vehicle by the Fire Department. No discounts, options, or prepayment schedules shall be listed on the proposal page. All such items shall be listed on a separate page entitled OPTIONS and may or may not be considered at the discretion of the fire department.

VEHICLE SUPPORT DOCUMENTATION

For long term support of the vehicle and in order to provide proper maintenance, the following information shall be required with the delivery of the vehicle. It may be required to have this information provided during the bid process to ensure that the proper information is available from a potential vendor. Failure to provide this information in the exact requested format as a minimum shall be cause for rejection of the bid. Three-ring binders filled with vendor catalogs

Hooksett Fire –Rescue Department
Specifications for Stainless Steel Pumper Tanker Bid # 11-05

**Bidder
Complies**

Yes	No
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being supplied as maintenance and operation manual shall not be acceptable under the conditions of this bid.

This vehicle shall be in operation for a minimum of twenty (20) years. Fiscal responsibility of the vehicle extends beyond the initial cost of the apparatus. Reducing service and maintenance costs of the vehicle during it's useful life is a major consideration in the purchase of this apparatus. The requested documentation shall be utilized to properly train personnel for operation of the vehicle and to develop proper preventative maintenance programs to reduce operating cost of the vehicle.

With delivery of the vehicle, the following information shall be provided in electronic format. The format shall be such as to provide hyperlinks to major categories and/or subjects from a content page. A word search engine shall provide quick transport of the user to any area within the document when a keyword or phrase is found. The entire manual shall be able to be printed from the electronic media to paper form. The manual must be compatible with both PC and Mac platforms.

An electronic Operator's and Maintenance Manual shall be provided. This manual shall encompass complete information for the vehicle and vehicle systems including all accessories and/or options.

The Operator section of the manual shall describe each component, gauge and switch with proper operation and operational warnings.

The Maintenance section of the manual shall provide proper maintenance of the vehicle for all systems and components supplied.

A Lubrication section shall be provided in the manual. This section shall provide all lubricant types and capacities for the vehicle. Included in this section of the manual shall be lubrication diagrams to visually locate the lubrication points of the vehicle.

An electronic Electrical System Manual shall be provided. This manual shall provide complete wiring schematics for the vehicle.

The manual shall be provided with diagrams of the vehicle showing the wiring harness routing within the vehicle. Each of these diagrams shall include the connectors between the harnesses that provide a hyperlink to a drawing of the actual connector where pin functions can be examined.

Schematics for each system of the installed vehicle shall be provided with hyperlinks to the connectors for pin designations and to the vehicle drawings for harness location within the vehicle.

Additional documentation to be provided:

A vehicle build sheet shall be provided. This build sheet shall include the major assemblies used in construction of the vehicle. Final inspection data including the serial numbers of the engine, transmission, axles, and tires equipped on the vehicle.

Hooksett Fire –Rescue Department
Specifications for Stainless Steel Pumper Tanker Bid # 11-05

**Bidder
Complies**

Yes	No
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ORIGIN OF MANUFACTURER

Any manufacturer submitting a proposal or bid to these specifications shall meet the following conditions:

1. The manufacturer of the apparatus herein specified shall be wholly owned (100%) and managed by a company, corporation and/or parent company that is wholly based and permanently resides in the United States of America.
2. The company, corporation, and/or parent company, and all assets belonging to such, shall be wholly owned and managed by the entities specified above.
3. Any proposal, bid or response to these specifications by any foreign based, owned or managed (in part or in whole) company, corporation and/or parent company, shall be cause for immediate rejection.
4. Any proposal, bid or response to these specifications by any company, corporation and/or parent company, that is owned, operated, managed or held in contract, in part or wholly by a foreign interest partnership or other agreement, shall be cause for immediate rejection.

There shall be no exception to these requirements.

COMMERCIAL CHASSIS TO BE SUPPLIED BY APPARATUS MANUFACTURER

The following International/Navistar chassis shall be provided:

Code	Description
SF66700	Base Chassis, Model 7600 SBA 6X4 2010 with 264.00 Wheelbase, 196.90 CA, and 100.00 Axle to Frame.
1570	TOW HOOK, FRONT (2) Frame Mounted
1CBU	FRAME RAILS Heat Treated Alloy Steel (120,000 PSI Yield); 10.125" x 3.580" x 0.312" (257.2mm x 90.9mm x 8.0mm); 480.0" (12192) Maximum OAL
1GBP	FRAME REINFORCEMENT Outer "C" Channel, Heat Treated Alloy Steel (120,000 PSI Yield); 10.813" x 3.892" x 0.312"; (274.6mm x 98.9mm x 8.0mm); 480.0" (12192mm) Maximum OAL
1LMY	BUMPER, FRONT Full Width, Aerodynamic, Chrome Plated Steel; 0.189" Material Thickness
1WHR	WHEELBASE RANGE 250" (635cm) Through and Including 311" (790cm)
2ARY	AXLE, FRONT NON-DRIVING {Meritor MFS-20-133A} Wide Track, I-Beam Type, 20,000-lb Capacity
3AGA	SUSPENSION, FRONT, SPRING Parabolic, Taper Leaf; 20,000-lb Capacity; With Shock Absorbers
4091	BRAKE SYSTEM, AIR Dual System for Straight Truck Applications
4193	BRAKES, FRONT, AIR CAM 16.5" x 6", Includes 24 SqIn Long Stroke Brake Chambers
4722	DRAIN VALVE {Bendix DV-2} Automatic; With Heater, for Air Tank
4AZS	AIR BRAKE ABS {Bendix AntiLock Brake System} With Electronic Stability Program (4-channel) With Automatic Traction Control

Hooksett Fire –Rescue Department
Specifications for Stainless Steel Pumper Tanker Bid # 11-05

**Bidder
Complies**

	Yes	No
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4EBD	AIR DRYER {Meritor Wabco System Saver 1200} with Heater	
4ETE	BRAKE CHAMBERS, FRONT AXLE {Haldex} 24 SqIn	
4EVL	BRAKE CHAMBERS, REAR AXLE {Haldex GC3030LHDHO} 30/30 Spring Brake	
4NDB	BRAKES, REAR, AIR CAM S-Cam; 16.5" x 7.0"; Includes 30/30 Sq.In. Long Stroke Brake Chamber and Spring Actuated Parking Brake	
4SPM 5710	AIR COMPRESSOR {Bendix} 15.9 CFM Capacity of Single Cylinder STEERING COLUMN Tilting and Telescoping	
5CAL	STEERING WHEEL 2-Spoke, 18" Diam., Black	
5PTB 7BDA	STEERING GEAR (2) {Sheppard M-100/M-80} Dual Power EXHAUST SYSTEM Single, Horizontal, Aftertreatment Device Frame Mounted Right Side Back of Cab, Includes Horizontal Tail Pipe with Plymovent extension	
7SDA	ENGINE COMPRESSION BRAKE {MaxxForce} by Jacobs; for MaxxForce 11 & 13 Engines, With Selector Switch and On/Off Switch, Transmission programmed to fore to 2 nd when engine compression brake is engaged	
7WZY	SWITCH, FOR EXHAUST 2 Position, Lighted & Latching, ON/OFF Type, Mounted in IP, Inhibits Diesel Particulate Filter Regeneration as Long as Switch is in ON Position	
8000	ELECTRICAL SYSTEM 12-Volt, Standard Equipment	
8630	IGNITION SWITCH Keyless	
8718	POWER SOURCE Cigar Type Receptacle without Plug and Cord	
8GWY	ALTERNATOR {Leece-Neville 14931PAH} Brush Type, 12 Volt 320 Amp. Capacity, Pad Mounted	
8HAB	BODY BUILDER WIRING Back of Standard Cab at Left Frame or Under Extended or Crew Cab at Left Frame; Includes Sealed Connectors for Tail/Amber Turn/ Marker/ Backup/Accessory Power/Ground and Sealed Connector for Stop/Turn	
8MKL 8RJU	BATTERY SYSTEM {International} Maintenance-Free, (3) 12-Volt 1950CCA Total RADIO {International} AM/FM Stereo With CD Player, Weatherband, Clock, Auxiliary Input, Includes Multiple Speakers	
8THB	BACK-UP ALARM Electric, 102 dBA	
8TPA	DATA RECORDER Includes Display Mounted in Overhead Console	
8WCL	HORN, AIR Black, Single Trumpet, Air Solenoid Operated	
8WJV	BATTERY DISCONNECT SWITCH {Joseph Pollak} for Cab Power Disconnect Switch; Lever Operated, Disconnects Power to PDC, Does Not Disconnect Charging Circuits, Cab Mounted	
8WNR	RUNNING LIGHT (2) Omit Item	
8WXG	STARTING MOTOR {Mitsubishi Electric Automotive America 105P} 12-Volt, with Soft-Start	
8WZP	INDICATOR, BATTERY WARNING Green BATTERY ON Indicator, Mounted on Left Side of Instrument Panel, To be Used with Factory Installed or Customer Mounted Battery Disconnect Switch	

Hooksett Fire –Rescue Department
Specifications for Stainless Steel Pumper Tanker Bid # 11-05

**Bidder
Complies**

	Yes	No
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8XAH	CIRCUIT BREAKERS Manual-Reset (Main Panel) SAE Type III With Trip Indicators, Replaces All Fuses Except For 5-Amp Fuses	
9585	FENDER EXTENSIONS Rubber	
9HAN	INSULATION, UNDER HOOD for Sound Abatement	
9HBM	GRILLE Stationary, Chrome	
9HBN	INSULATION, SPLASH PANELS for Sound Abatement	
9WBB	GRILLE EMBER SCREEN Mounted to Grille to Keep Hot Embers out of Engine Air Intake System	
9WBK	FRONT END Tilting, Fiberglass, With Three Piece Construction Includes Long Hood	
10060	PAINT SCHEMATIC, PT-1 Single Color, Design 100	
10761	PAINT TYPE Base Coat/Clear Coat, 1-2 Tone	
10WBE	KEYS - ALL ALIKE, ID Z-001	
12BAW	ENGINE, DIESEL {MaxxForce 13} EPA 10, 475 HP @ 1700 RPM, 1700 lb-ft Torque @ 1000 RPM, 2100 RPM Governed Speed, 475 Peak HP (Max)	
12THT	FAN DRIVE {Horton Drivemaster} Direct Drive Type, Two Speed With Residual Torque Device for Disengaged Fan Speed	
12UBL	RADIATOR Aluminum; Welded, Front to Back CrossFlow System, 1593 SqIn, 1929 SqIn Dual CAC, 1548 SqIn 3 Core LTR	
12UXH	FEDERAL EMISSIONS for 2010; MaxxForce 13 Engines	
12VBC	AIR CLEANER Single Element	
12VZB	ENGINE CONTROL, REMOTE MOUNTED for PTO with MaxxForce 11 & 13 Engines	
12WBR	FAN OVERRIDE Manual; With Electric Switch on Instrument Panel, (Fan On With Switch On)	
12WEG	COLD STARTING EQUIPMENT Automatic; With Engine ECM Control	
12WTA	FAN DRIVE SPECIAL EFFECTS Fan Cooling Ring with Fan Shroud Effects, Engine Mounted	
12WYK	ENGINE WATER COOLER {Sen-Dure} Auxiliary, For Use With Fire Trucks	
12WZE	EMISSION COMPLIANCE Federal, Does Not Comply With California Clean Air Regulations	
13AKR	TRANSMISSION, AUTOMATIC {Allison 4000EVS_P} 4th Generation Controls, Close Ratio, 5-Speed; With Overdrive, Includes Oil Level Sensor, With Provision for PTO, Less Retarder	
13WAW	OIL COOLER, AUTO TRANSMISSION {Modine} Water to Oil, for Allison or CEEMAT Transmission	
13WBL	TRANSMISSION SHIFT CONTROL {Allison} Push-Button Type; for Allison 3000 & 4000 Series Transmission	
13WLM	TRANSMISSION OIL Synthetic; 63 thru 76 Pints	

Hooksett Fire –Rescue Department Specifications for Stainless Steel Pumper Tanker Bid # 11-05				Bidder Complies
		Yes	No	
13WUE	ALLISON SPARE INPUT/OUTPUT for Emergency Vehicle Series (EVS); Fire/ Pumper, Tank, Aerial/Ladder			
13WYL	SHIFT CONTROL PARAMETERS Transmission programmed to force 2 nd when engine compression brake is engaged. Transmission programmed for 4 speed and 5 th activated with mode button.			
14HRC	AXLE, REAR, TANDEM {Meritor RT-46-164EH} Single Reduction, Standard Width, 46,000-lb Capacity, With Driver Controlled Locking Differential in Forward Rear and Rear-Rear Axle and 200 Wheel Ends . Gear Ratio: 5.63			
14ULY	SUSPENSION, REAR, TANDEM {Hendrickson HMX-460-54} Walking Beam Type 54" Axle Spacing; 46,000-lb Capacity of Hooksett, With Rubber End Bushings, Transverse Torque Rods, Less Shock Absorbers			
14WAL	SUSPENSION/REAR-AXLE IDENTITY for Meritor Tandem Rear Axles With Bar- Pin Beam Attachment Type Suspensions			
14WLE	AXLE, REAR, LUBE {EmGard 75W-90} Synthetic Oil; 65 thru 89.99 Pints			
15LKW	FUEL/WATER SEPARATOR {Davco Fuel Pro 382} With Fuel Heated Fuel Heater, Thermostatic Fuel Temperature Control, Mounted In Standard Position, Includes Water-In-Fuel Light			
15SGK	FUEL TANK Top Draw; D Style, Non Polished Aluminum, 50 U.S. Gal., 189 L Capacity, 16" Deep, With Quick Connect Outlet, Mounted Right Side, Under Cab			
15WCS	FUEL COOLER Less Thermostat; Mounted in Front of Cooling Module			
16030	CAB Conventional			
16HBA	GAUGE CLUSTER English With English Electronic Speedometer			
16HCK	SEATBELT WARNING PREWIRE Includes Seat Belt Switches and Seat Sensors for all Belted Positions in the Cab and a Harness Routed to the Center of the Dash for the Aftermarket Installation of the Data Recorder and Seatbelt Indicator Systems, for 1 to 3 Seat Belts			
16HGH	GAUGE, OIL TEMP, ALLISON TRAN			
16HHE	GAUGE, AIR CLEANER RESTRICTION {Filter-Minder} With Black Bezel Mounted in Instrument Panel			
16HKT	IP CLUSTER DISPLAY On Board Diagnostics Display of Fault Codes in Gauge Cluster			
16JJE	SEAT, DRIVER {National 2000} NFPA Compliant, Air Suspension, High Back With Integral Headrest, Vinyl, Isolator, 1 Chamber Lumbar, 2 Position Front Cushion Adjust, -3 to +14 Degree Back Angle Adjust			
16PPG	SEAT, PASSENGER {National 2000} NFPA Compliant, Air Suspension, High Back With Integral Headrest, Vinyl, Isolator, 1 Chamber Lumbar, 2 Position Front Cushion Adjustment, -3 to +14 Degree Back Angle Adjust			
16SDC	GRAB HANDLE (2) Chrome Towel Bar Type With Anti-Slip Rubber Inserts; for Cab Entry, Mounted Left and Right, Each Side at "B" Pillar			

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**Bidder
Complies**

	Yes	No
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16SDU	MIRRORS (2) {Lang Mekra} Styled; Rectangular, 7.09" x 15.75" & Integral Convex Both Sides, 102" Inside Spacing, Breakaway Type, Heated Heads Thermostatically Controlled, Power Both Sides, Clearance Lights LED, Bright Finish Heads & Brackets	
16SJX	MIRROR, CONVEX, HOOD MOUNTED (2) {Lang Mekra} Bright, Heated, Left and Right Sides 7.44" Sq	
16VBT	CAB SOUND INSULATION Includes Dash Insulator and Engine Cover Insulator, Premium Floormat, and Sound Dampening Patches	
16VBZ	SEAT BELT All Red; 1 to 3	
16VSL	WINDSHIELD Heated, Single Piece	
16WCT	AIR CONDITIONER {Blend-Air} With Integral Heater & Defroster	
16WJS	INSTRUMENT PANEL Center Section, Flat Panel	
16WKY	HVAC FRESH AIR FILTER	
16WLE	STORAGE POCKET, DOOR Molded Plastic, Full Width; Mounted on Passenger Door	
16WRX	CAB INTERIOR TRIM Deluxe	
16WSK	CAB REAR SUSPENSION Air Bag Type	
16XWD	SUNSHADE, EXTERIOR Aerodynamic, Painted Roof Color; Includes Integral Clearance/Marker Lights	
16XWJ	WINDSHIELD WIPER BLADES Snow Type	
27DHH	WHEELS, FRONT DISC; 22.5" Polished Aluminum, 10-Stud (285.75MM BC) Hub Piloted, Flanged Nut, Metric Mount, 9.00 DC Rims; With Steel Hubs	
28DMC	WHEELS, REAR DUAL DISC; 22.5" Polished Aluminum, 10-Stud (285.75MM BC) Hub Piloted, Flanged Nut, Metric Mount, 8.25 DC Rims; With Steel Hubs	
29PBS	COATING IDENTITY, REAR WHEELS {Accuride Accu-shield} Aluminum Disc Rear Wheels, With Vendor Applied Clear Coat; Not for Super Single Wide Base	
29PBT	COATING IDENTITY, FRONT WHEELS {Accuride Accu-shield} Disc Front Wheels; Aluminum, With Vendor Applied Clear Coat Not for Wide Base	
29WLA	WHEEL BEARING, FRONT, LUBE {EmGard 50W} Synthetic Oil 0/0 0 7372130121 (8) TIRE, REAR 11R22.5 G182 RSD (GOODYEAR) 496 rev/mile, load range G, 14 ply	
7782548109	(2) TIRE, FRONT 315/80R22.5 G289 WHA (GOODYEAR) 484 rev/mile, load range L, 20 ply	

DIAMONDPLATE FUEL TANK COVER

The fuel tank shall have an NFPA 1901 slip resistant diamond plate cover.

DIAMONDPLATE BATTERY COVER

The battery compartment shall have an NFPA 1901 removable, slip resistant diamond plate cover. Cover to be easily removable without tools.

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Yes	No
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EXTERIOR WALL DIAMOND PLATE

The cab lower exterior rear wall shall be covered with a single sheet of bright aluminum treadplate to protect the back of the cab from scratches.

FRONT WHEEL TRIM

The front axle shall be trimmed with mirror finish, 304L grade, non-corrosive stainless steel 'baby moon' hub caps with an opening for viewing the oil seal cover, and bright finished nut covers.

REAR WHEEL TRIM

The rear axle(s) shall be trimmed with mirror finish, 304L grade non-corrosive stainless steel "Lincoln Hat" hub cover and bright finished nut covers.

CAB PAINTED TWO-TONE

The chassis cab shall be painted two tone, Black roof and red lower half. (paint breaks lines to be determined at preconstruction meeting)

CAB GROUND LIGHTING

One (1) light shall be mounted beneath each door. These lights shall be designed to provide illumination on areas under the driver and officer area entry/egress. All cab ground lights shall automatically activate when any cab exit door is opened and the parking brake is set.

A single switch shall be provided in the cab to activate all of the apparatus ground lights manually.

MULTIPLEX WIRING INTERFACE

The apparatus shall be equipped with a Class 1 ES-Key Management System for complete control of the electrical system devices. **No Exceptions**

REFLECTIVE MATERIAL - INTERIOR CAB DOOR

The front cab doors shall have a minimum of 96 square inches of reflective material affixed to the inside of each door.

CAB CONSOLE

There shall be a console installed in the cab between the two (2) front seats. The console shall be fabricated from aluminum with a black powder coat finish and shall have the front portion of the top set up for the master switch panel and the rear portion shall have a hinged lid that provides access to a binder storage area with two dividers.

AIR INLET / OUTLET

An outside air system inlet/outlet connection shall be provided and mounted in an area beneath the driver's door. This connection shall be clearly labeled as to the function. A pipe thread frame coupling shall be provided with 1/4" npt threads. The fire department shall install the appropriate female hose quick connect fitting.

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Complies**

Yes	No
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TIRE PRESSURE MONITORING DEVICE

Each tire installed on the apparatus shall be equipped with a tire pressure monitoring device. The device shall consist of a valve stem cap with an LED tire alert to indicate tire pressure conditions. The LED will flash when the tire drops 8 psi below the factory setting.

AIR HORNS

Dual stutter tone air horns shall be supplied & mounted one (1) each side of the hood.

AIR HORN IGNITION CONTROL

To eliminate inadvertent operation the chassis air horns shall be operable only when the battery selector and ignition switch are in the "ON" position.

AIR HORN CONTROL SWITCHES

One (1) foot switch for the air horns shall be provided on the left side of the driver's and one (1) on the right side of the officer's side cab floor.

HORN / ELECTRONIC SIREN ELECTOR SWITCH

The air horn and the electric horn shall sound simultaneously by depressing the horn button in the steering wheel.

A switch shall be supplied for the driver to control either the electric and air horns or the electronic siren from the steering wheel horn button. This switch shall be clearly labeled with a back-lit legend.

ELECTRONIC SIREN

A Federal Signal 100 watt electronic siren control with microphone, model #PA300, shall be provided.

Q2B MECHANICAL SIREN

A FEDERAL Q2B siren shall be mounted on the left (driver's) side through the face of the front bumper.

MASTER WARNING LIGHT CONTROL

To eliminate inadvertent operation the mechanical siren shall be operable only when the Master Warning Light switch is in the "ON" position.

A momentary rocker switch shall be provided in the driver's switch panel for operation of the siren brake. This switch shall be backlit with the legend "SIREN BRAKE".

A second momentary switch shall be provided in easy reach of the officer for operation of the siren brake. This switch shall be labeled "SIREN BRAKE".

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Complies**

Yes	No
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SIREN CONTROL SWITCHES

One (1) foot switch for the siren shall be provided on the left side of the driver's side cab floor and one (1) on the right side of the officer's side cab floor to operate the Q Siren.

SIREN SPEAKER

There shall be one (1) Cast Products polished aluminum 100 watt speaker provided. The speaker shall be recessed into the right (officer's) side of the front bumper immediately outboard of the chassis frame rails.

COMPARTMENT OPEN LIGHT

A Red Open Compartment Flashing Light, Whelen OS Series LED shall be mounted on the driver's side face of the overhead pane in a chrome flange.

The light circuit shall be wired so that the light circuit is deactivated when the parking brakes of the apparatus are applied.

A label shall be applied adjacent to the light '**DOOR OPEN**'.

ENGINE MAINTENANCE LIGHTS

Two (2) engine maintenance lights shall be supplied beneath the hood. These lights shall illuminate automatically when the hood is tilted.

VEHICLE DATA RECORDER

Apparatus shall be equipped with a Class1 "Vehicle Data Recorder and Seat Belt Warning System"

SEAT BELT WARNING SYSTEM

There shall be a seat belt indicator system supplied in the cab. The indicator system shall indicate seat belt use for each individual seating position when the seat is occupied.

A display panel shall be supplied in the dash area. The panel shall have an audible indicators and a red light display to indicate that a seat belt has not been fastened.

BACKUP CAMERA

There shall be an ASA Audiovox video system provided on the apparatus.

The color monitor shall be an ASA AOM713WP. The monitor for the back-up camera shall be mounted within view & reach of the driver to aide in backing up the apparatus.

The backup camera system shall be powered when the vehicle's transmission is placed into reverse.

REAR CAMERA - COLOR - HIGH PERFORMANCE

There shall be supplied a color, heavy duty high resolution observation camera, ASA Model VCCS150B. The camera shall have a black housing, built-in microphone, enhanced low light

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Complies**

Yes	No
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performance the camera shall have a non-corrosive mounting bracket and stainless steel hardware. The backup camera shall be mounted at the rear of the apparatus beneath the hosebed.

12VDC POWER POINT

A 12 volt, socket (cigarette lighter) type, receptacle shall be provided with a protective hinged cover. The power point shall be wired to direct battery power with the appropriate wire size and fuse and installed within reach of the officer.

12VDC POWER CIRCUIT

Dual circuit protected 30 amp battery "hot" circuit, a circuit protected 30 amp battery switched circuit, and a ground circuit with the proper wire size to handle the current shall be provided. These circuits are provided for two-way radio and/or accessory wiring.

The radio / accessory power circuit shall terminate in the console between the front seats.

RADIO ANTENNA MOUNT WIRING

Dual (2) NMO mount shall be roof mounted, one on the driver's side of the cab. & one on the officers side of the cab. The coax is to be routed in the cab console

ROAD SAFETY KIT

One (1) 2-1/2# ABC DOT Approved fire extinguisher shall be provided and shipped loose with the chassis.

One (1) set of DOT approved hazard triangles shall be supplied. They shall be stored in a plastic case and shipped loose.

BATTERY CHARGER

Advanced electronic 4-step battery charger/power supply with a 40 amp output shall be installed in the cab.

120-VOLT AC RECEPTACLE

A KUSSMAUL 120-volt AC electrical receptacle connection shall be installed beneath the driver's door.

PUMP COMPARTMENT

The pump compartment shall be separate from the hose body and compartments so that each may flex independently of the other. It shall be a fabricated assembly of stainless steel tubing, angles and channels, which does not support the fire pump and or running boards. The pump compartment shall be mounted onto the chassis through rubber mounts in a four point pattern to allow for a chassis frame twist.

Pump compartment, pump, plumbing and gauge panels shall be removable from the chassis in a single assembly and shall have an approximate width of 47". The pump compartment shall be of a

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Complies**

Yes	No
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modular design.

A stainless steel framework shall provide the support for the mounting of the pump lower panels. Stainless steel structure shall be provided as a support behind all control push-pull handles enabling a firm foundation for operation of the valve control.

An upper stainless framework shall encompass the crosslay hose bed and walk way area for operation of the deck gun. The floor of this section shall be a bolt-on design to provide access for major repairs and or service.

RUNNING BOARDS

The running boards shall be separate from the hose body, compartments, and pump compartment so that each may flex independently of the other and to allow water to flow freely away from the running board area. Separation of the running boards and support structure from the hose body, compartments and pump compartment is desired to provide field service of the running board without major repairs to the pump compartment in the event of an accident.

The steel running board supports shall be bolted directly to the chassis frame rails to provide proper support. The running board step surface shall be covered in punched grip type stainless steel meeting the current revision of NFPA 1901 for step requirements.

DUNNAGE COMPARTMENT OVER PUMP

There shall be a dunnage compartment furnished on top of the pump module. The floor shall be bolted in place and removable for access to the fire pump components for major service.

DUNNAGE COMPARTMENT GRABRAILS

Two (2) bright anodized extruded aluminum grab rails shall be provided, one (1) each side of the pump house on the side of the dunnage compartment just below the top edge mounted horizontal to provide easy access to the dunnage compartment. Molded rubber gaskets shall be installed under the grab handles to protect the surface of the compartment.

PUMP COMPARTMENT WORK LIGHT

The pump compartment shall have one (1) Truck Lite, model 40 clear work light to provide illumination of the pump compartment. The light shall have a weather resistant, toggle style on/off switch located inside the pump compartment adjacent to the left service door area. The power for the pump module light shall be switched thru the battery master switch.

FRONT PUMP COMPARTMENT PANEL

A brushed stainless steel panel shall be provided on the front of the pump module.

PUMP HOUSE HEATER

A 53,500 BTU, automotive type hot water heater shall be provided and mounted in the fire pump compartment. The heater shall be connected to the truck engine coolant system and have shutoff valves in both the feeder and return lines. Heater shall include a 12 volt fan with a switch located at the pump operator's panel.

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Complies**

Yes	No
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PUMP SERVICE ACCESS REQUIREMENTS

It is the opinion that service access to the pump, valves, gauges and controls are of the utmost importance. Special consideration shall be taken when evaluating the pump module design of the offered. Pump panels that offer little to no access without the use of tools shall not be considered compliant with this requirement.

PUMP CONTROL PANELS

All pump controls and gauges shall be located at the left (street) side of the apparatus and properly identified. The layout of the pump control panel shall be ergonomically efficient and systematically organized. The pump operator's panel shall be removable in two (2) main sections for ease of maintenance. The pump and gauge panels shall be constructed of 12-gauge stainless steel. The gauge panel shall contain a panel for mounting of all instruments, engine monitoring system, and pressure control system.

The gauge panel shall be a double panel door design to protect in the enclosed door all gauge tubing, switch, and control wiring. The gauge panel exterior shall be made of 12-gauge stainless steel. The inner pan shall bolt onto the stainless exterior panel. There shall be an access panel in the inner panel easily removable for control or gauge service or replacement.

The gauge panel door shall be designed as an opening pump house service door on the street (left) side of the pump house. This gauge panel door shall provide an opening minimum size of 41 inches wide by 14 inches in height.

The lower section of the panel shall contain all inlets, outlets, and drains. All push-pull valve controls shall have quarter turn locking control rods with chrome plated zinc tee handles. Guides for the push-pull control rods shall be chrome plated zinc castings securely mounted to the pump panel. Push-pull valve controls shall be capable of locking in any position. The control rods shall pull straight out of the panel and shall be equipped with universal joints to eliminate binding.

There shall be an opening pump house service door on the curb (right) side of the pump house. This door shall provide an opening minimum size of 41 inches wide by 14 inches in height.
All stainless panels used in the construction of the pump house shall have a brushed finish.

PUMP PANEL IDENTIFICATION TAGS

The identification tag for each valve shall be recessed in the face of the control handle. All discharges shall have color-coded plastic identification tags, with each discharge having its own unique color. Color-coding shall include the labeling of the outlet and the drain for each corresponding discharge.

CONTROLS AND GAUGES

The following shall be provided on the pump and gauge panels in a neat and orderly fashion. The gauge panel shall include the following:

ENFO-III ENGINE MESSAGE CENTER

Class1 ENFO III Engine Information Display

Class 1 Pressure Governor (captain)

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Complies**

Yes	No
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MASTER GAUGES

The pump master vacuum and pressure gauges shall be 4-1/2" in diameter with white dial face gauges with black lettering and markings.

The master vacuum gauge shall be a compound style gauge with a vacuum/pressure range of -30" - 0 - 400 psig with the dial face of the gauge labeled in black INTAKE.

The master pressure gauge shall be provided with a range of 0-400 psig and the dial face of the gauge labeled in black DISCHARGE.

The gauges shall be fluid filled with pulse and vibration dampening "Interlube" to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to -40 degrees F. The cases shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area. The gauge accuracy for the gauge shall be plus or minus 1% of full scale per ANSI B40.1, Grade 1A.

To prevent internal freezing and to keep contaminants from entering the gauge, the stem and bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage.

MASTER GAUGE TEST PORTS

Adjacent to each gauge there shall be a pressure tap to provide simultaneous reading of the vacuum and pressure exerted on the individual gauge.

PRESSURE GAUGES

Each line pressure gauge shall be mounted immediately above the control for the corresponding valve. The individual line pressure gauges for the discharges shall be 2-1/2" in diameter with white dial face gauges with black lettering and markings. The gauges shall be a compound style gauge with a vacuum/pressure range of 0 - 400 psig.

The gauges shall be fluid filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to -40 degrees F. The cases shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area. The gauge accuracy for the gauge shall be plus or minus 2% mid-scale, plus or minus 3% balance, per ANSI B40.1, Grade 1A.

To prevent internal freezing and to keep contaminants from entering the gauge, the stem and bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage.

PUMP OPERATION HOURMETER

A pump hourmeter shall be supplied. The hourmeter shall be environmentally sealed to prevent moisture from entering the instrument. The face shall provide a display of the total cumulative hours of pump engagement. The hourmeter shall be protected by being located inside the pump module.

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Complies**

Yes	No
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PUMP PANEL LIGHTING

The pump operator's panel shall be supplied with a LED light system. LED strip lights with a stainless steel hood shall be mounted across the top of the pump panel gauges and controls on each side.

All pump module lighting shall illuminate automatically when the parking brake is engaged.

DRAIN DISCHARGES

The 3/4 inch drain valves shall be equipped with 90-degree fittings with 3/4" I.D. tubing to direct the discharge water toward the ground.

AIR HORN ACTIVATION SWITCH

A switch shall be located on the pump panel to activate the chassis air horn. The switch shall be a momentary pushbutton weatherproof type switch. The switch shall be supplied with the proper identification label.

RADIO COMPARTMENT

A fully enclosed polished stainless steel radio compartment shall be furnished and installed, location to be decided at the pre-construction meeting.

The radio compartment shall be construct of 12ga. stainless steel. The compartment shall have a hinged door with gasket and a single lift and turn type latch.

WATER TANK LEVEL GAUGE

The apparatus shall be equipped with a Class 1 "Inteli-Tank" Tank Level Gauge for indicating water level.

HIGH VISIBILITY WATER TANK LEVEL INDICATORS - ADDITIONAL

There shall be in addition to the Class 1 water tank level gauge on the pump operator's panel and in the cab, a Whelen PSTANK LED high visibility water level indicator supplied one (1) on each side of the pump module on the dunnage area sides. As well as one located at the rear of the apparatus body.

PUMP MANUFACTURER AND MODEL

The pump shall be a Hale Q-FLO Plus model midship pump.

NO EXCEPTIONS

PUMP RATING AND TEST REQUIREMENTS

The pump shall be of a size and design to mount on the chassis rails of commercial truck chassis, and have the capacity of 1250 gallons per minute (U.S. GPM), NFPA1901 rated performance.

AIR PRIMER

The pump shall be furnished with an air driven venturi priming system. The system shall be plumbed to the chassis air. A switch to control the air primer shall be provided on the pump operator's panel.

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Complies**

Yes	No
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PNEUMATIC PUMP SHIFT

The pump shift shall be air operated and shall incorporate an air double action piston to shift from road to pump and back. A manual or electric operated pump shift mechanism is not acceptable. The pump shift switch shall be mounted in the cab and identified as "AIR PUMP SHIFT" and include instructions permanently inscribed on the pump shift switch plate. The in-cab operating valve uses a spring loaded locking collar to prevent it from accidentally being moved.

The pump shift control assembly shall incorporate an indicating light system, which will notify the operator when the shift has been completed to PUMP and when the chassis transmission is in correct pumping gear.

The switch that activates the lights must be mounted on the pump transmission and positioned so that the pump shift arm activates the switch only when the shift arm has completed its full travel into PUMP position. An additional indicator light shall be on the pressure governor control at the pump operator's panel to indicate a completion of the pump shift.

PUMP SHIFT OVERRIDE

There shall be a manual override on the pump shift. The override control shall be activated from the lower left side of the pump panel.

ANODE SYSTEM

To reduce the effect of galvanic action the pump shall be equipped with two alloy (2) anodes. One anode is to be installed on the inlet (suction) side of the system and one anode is to be installed on the pressure (outlet) side of the system.

SUCTION PRESSURE RELIEF VALVE

An adjustable pressure relief valve shall be provided. The valve shall have a 2" male NPT threaded discharge outlet. The unit shall be covered by a five-year warranty.

The discharge side of the intake relief valve shall be plumbed to the right side below the running boards, away from but, visible to the pump operator, and shall terminate with an unthreaded pipe. The adjustment control shall be located behind the pump panel.

MASTER DRAIN

The apparatus shall be equipped with a Class 1 Manual Master Pump Drain for draining of the lower pump cavities, volute and water-carrying lines and accessories.

PUMP CERTIFICATION TEST

The apparatus shall be certified to the requirements of NFPA 1901 prior to delivery of the completed apparatus. The certificate shall be furnished with the apparatus on delivery.

FIRE PUMP WARRANTY

Standard 5 year warranty.

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Complies**

Yes	No
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ELECTRONIC PUMP MANUALS

Two (2) sets of electronic fire pump service and operation manuals shall be provided with the completed apparatus.

LEFT & RIGHT SIDE STEAMER INLETS

There shall be one (1) steamer inlet furnished on the left side pump panel & One (1) on the Right side pump panel. The suction inlets shall have 6" NST threads. The suction inlets shall have a removable strainer provided inside both the external inlets.

Two six (6) inch chrome plated caps with long handles shall be supplied. The caps shall be capable of withstanding 500 PSI and be trimmed with the apparatus manufacturer's logo in the center of the cap.

LEFT SIDE 2.5" INTAKE

There shall be an 2.5" intake located on the left (street) side rear of the pump and it shall contain:

A 2-1/2" quarter-turn swing-out valve. The inlet shall be provided with a 2-1/2" NST female swivel that extends through the pump panel. The inlet valve shall have a push-pull type control handle located adjacent to the valve. One (1) 2-1/2" chrome plated rocker lug plug with chain shall be supplied

LEFT SIDE DISCHARGE #1

The forward discharge on the left (street) side of the pump panel shall contain:

A 2-1/2" discharge shall be provided. The discharge outlet shall have a 2-1/2" quarter-turn swing-out valve. The discharge shall be provided with chrome plated 30-degree discharge elbow with 2-1/2" NST male threads that extends through the pump panel.

One (1) chrome plated, Class 1, 2-1/2" rocker lug cap with lug vent and chain shall be furnished

LEFT SIDE DISCHARGE #2

The second from the forward discharge on the left (street) side of the pump panel shall contain:

A 2-1/2" discharge shall be provided. The discharge outlet shall have a 2-1/2" quarter-turn swing-out valve. The discharge shall be provided with chrome plated 30-degree discharge elbow with 2-1/2" NST male threads that extends through the pump panel.

One (1) chrome plated, Class 1, 2-1/2" rocker lug cap with lug vent and chain shall be furnished

RIGHT SIDE DISCHARGE #3

The forward discharge on the right (curb) side of the pump panel shall contain:

A 2-1/2" discharge shall be provided. The discharge outlet shall have a 2-1/2" quarter-turn swing-out valve. The discharge shall be provided with chrome plated 30-degree discharge elbow with 2-1/2" NST male threads that extends through the pump panel.

One (1) chrome plated, Class 1, 2-1/2" rocker lug cap with lug vent and chain shall be furnished

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**Bidder
Complies**

Yes	No
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RIGHT SIDE DISCHARGE #4

The second from the forward discharge on the right (curb) side of the pump panel shall contain:

A 3" discharge shall be provided. The discharge outlet shall have a 3" quarter-turn swing-out valve. The discharge shall be provided with chrome plated 30-degree discharge elbow with 3" NST male threads that extends through the pump panel.

STORZ ADAPTER

One (1) NST Female Rigid Rocker to 5" Storz hard coated aluminum adapter shall be provided. (ref. TFT AA1ST-NL)

One (1) 5" Storz cap and chain with suction gasket shall be provided. (ref. TFT A01ST)

REAR PRECONNECT - RIGHT SIDE

There shall be one (1) 3" discharge outlet located on the passenger side rear of the body below the hose bed. That has been sleeved through the tank. There shall be a chrome plated 3" NST adapter that extends through the rear of the body. The discharge shall be provided with a chrome plated 30-degree discharge elbow.

PUMP DUNNAGE AREA DIMENSIONS

The area behind of the crosslays shall be the dunnage area of the pump house. This area shall be enclosed with approximate dimensions of 68" wide x 19" deep x 32.25" front to back.

1.75" CROSSLAYS

The crosslays Two (2) shall be plumbed with 2" Schedule 40 stainless steel high pressure pipe. A 2" quarter turn ball valve shall be used to control water flow. The outlet shall be equipped with a 2" polished stainless steel 90 degree swivel with 1-1/2" male NPSH thread located in the hosebed.

This crosslay beds shall be capable of carrying a minimum of two hundred feet (200') of 1-3/4" double jacketed hose. The crosslay hosebed shall have inside dimensions of 4-1/4" wide x 19" tall x 72" wide.

DRAIN VALVE

Class 1, 1/4 turn drain valves shall be installed on each crosslay.

CROSSLAY DIVIDER

A crosslay divider shall be provided between the #1 and #2 crosslay. The divider shall be constructed from 1/4" thick abraded aluminum plate. There shall be a hand hole on each side of the divider

CROSSLAY HOSE GUIDES

Brushed stainless steel hose guides shall be provided on the left and right side of the crosslays.

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Complies**

Yes	No
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CROSSLAY HOSEBED COVER

A diamond plate hose bed cover shall be provided over the crosslay hosebeds. The cover shall be hinged so it lifts forward.

BOOSTER HOSE REEL

A Hannay booster hose reel with leak proof ball bearing swing joint, adjustable friction brake, and electric rewind shall be furnished. The reel shall have an all-aluminum frame and drum, polished aluminum discs, and plated drive chain, sprocket, hub assembly, swivel joints and fasteners. The reel capacity of Hooksett shall be at least 200' of 1" booster hose. The reel shall be plumbed with wire reinforced; high pressure hose coupled with reusable stainless steel fittings, and shall have a 1" swing out, ball valve with control on pump operator's panel. The booster hose reel shall be mounted in the dunnage compartment over the pump. Weatherproof remote switches on both pump panels.

Two (2) 100' lengths of 1" Reeltex booster hose shall be provided on the booster reel. They shall be high pressure type, 600 pounds test.

ROLLER ASSEMBLIES

The booster hose reel shall be equipped with heavy duty, stainless steel roller assemblies, set up to play out hose to each side of the apparatus.

BOOSTER REEL AIR BLOW OUT

An air blow out system shall be provided for the booster hose reel. Air from the chassis air system shall be utilized, with controls mounted on the pump panel.

BALL VALVES

All discharge ball valves shall be manual control 1/4 turn Elkhart or Akron heavy duty swing out valve with stainless steel ball unless specified otherwise.

TANK TO PUMP

The tank to pump piping shall be capable of delivering water to the pump at a rate of five hundred (500) gallons per minute.

The tank to pump line shall run from the pump to the front face of the water tank and down into the tank sump. A rubber coupling shall be included in this line to prevent damage from vibration or chassis flexing. The tank to pump line shall be 3" I.D. piping with a 3" ball valve.

TANK REFILL

A 2-1/2" tank refill line shall be provided using a 2-1/2" quarter-turn full flow ball valve controlled from the pump operator's panel with a manual locking handle. The tank refill shall be plumbed with high pressure flexible piping and high pressure flexible piping stainless steel couplings.

HEAT EXCHANGER DISCHARGE

A gated discharge line shall be installed to provide water from the fire pump to the chassis heat

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**Bidder
Complies**

Yes	No
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exchanger to assist in engine cooling during pumping operations. The heat exchanger line shall be controlled at the pump operator's panel with a Class 1 valve.

WATER TANK CONSTRUCTION

The tank shall have a rated capacity in U.S. gallons, complete with lifetime warranty. The tank manufacturer shall mark the tank and furnish notice that indicates proof of warranty.

The tank shall be constructed of 1/2" thick Polyprene & Mac226 sheet stock. This material shall be non-corrosive stress relieved thermoplastic, white in color and UV stabilized for maximum protection. The tank shall be of a special configuration and is so designed to be completely independent of the body and compartments. All exterior tank joints and seems shall be extrusion welded and/or contain the Bent Edge™ and tested for maximum strength and integrity. The top of the tank is fitted with removable lifting eyes designed with a 3-to-1 safety factor to facilitate easy removal.

The tank shall be capable of withstanding sustained fill rates of up to 1,000 GPM. All auxiliary outlets and inlets must meet N.F.P.A. 1900 guidelines in effect at the time of manufacture.

TANK MOUNTING

A tank mounting cradle shall be supplied. The tank shall rest on the tank mounting sub-frame, and shall be insulated from the sub-frame with a 2-1/2" wide rubber insulator. The tank shall sit cradle-mounted using four (4) corner angles welded directly to the tank sub-frame. The angles shall keep the tank from shifting left to right or front to rear. The tank is to be designed on the free-floating suspension principal and shall not require the use of hold downs. The tank shall be completely removable without disturbing or dismantling the apparatus body structure. The hosebed cross-braces shall act as water tank retainers. The water tank cradle shall be designed to be completely independent of the apparatus body to eliminate torsional stress loading in the body. No exception will be permitted to the tank mounting requirements.

SECOND TANK TO PUMP

A second tank to pump piping system shall be located to the rear of the tank to allow full evacuation/operation with the vehicle on an uphill attitude.

The 3" valve shall be an air operated valve with control switch located on pump operator's panel. A built-in check valve shall be provided in the tank to pump supply line to prevent the unintentional back filling of the water tank through the line.

APPARATUS BODY DESIGN AND CONSTRUCTION

The apparatus body shall be built of stainless steel and shall be designed for Fire Service use only. The body design shall be fully tested with proven engineering and test techniques such as finite element analysis, stress coating, and strain gauging shall have been performed with special attention given to fatigue life and structural integrity of compartments and body support system. All welding of body support system shall be accomplished by welders certified to the standards of the American Welding Society for the metals being used. The body shall be constructed in accordance with current NFPA requirements.

All metal work shall be free of sharp edges, objects or corners. Body width shall be a maximum of

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**Bidder
Complies**

Yes	No
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100" and shall be completely modular in design, allowing transfer of body components to a new chassis in the event of an accident or wear. Body components shall be removable from the chassis without cutting or bending.

The entire apparatus body shall be precision machined fabricated bolted construction, properly reinforced with integral flanges eliminating the need for add-on structural shapes. Stainless button head recessed alien head bolts and stainless aircraft style "ESNA" nuts shall be applied with proper torque rating for each fastener. Wherever possible, body bolts shall be hidden from plain view for appearance and ease of apparatus cleaning.

BODY MOUNTING

The entire Body shall be mounted with rubber isolators so as to allow chassis flex under the body as well as to eliminate vibration. All Bidders shall describe in detail the means in which the body is attached. **Ubolt style body mounting is unacceptable**

REAR OF BODY TOW EYES

Two (2) tow eyes with an eye diameter of not less than 3.5" shall be attached to the frame assembly. The tow eyes shall be fabricated of .625" thick steel. Which extend through the rear of the apparatus.

TOP OF BODY CONSTRUCTION

The upper body shall be constructed of 12 and 14-gauge prime stainless steel. Exterior stainless steel parts that are visible shall have #4B finish.

MODULAR BODY REQUIREMENTS

All body panels are to be laser cut on a CAM controlled laser to ensure accuracy (+/- .010"). The entire body shall be fabricated using precision holding fixtures to ensure accurate dimensions. The body assembly shall be securely bolted to the sub-frame utilizing steel certified Grade 8 bolts.

The sub-frame shall be bolted to the chassis frame utilizing 2" certified Grade 8 bolts. A minimum of four (4) bolts shall be used per sub-frame member. There shall be no welding of components to the chassis frame.

Pop rivets or metal screws shall not be used in any part of the structural body build up. All fasteners shall be stainless steel bolts with self-locking nuts of the proper size and strength for the required application.

Major body components shall consist of right and left body sides, and rear facing compartments. The pump module is to be completely separate from the main body to prevent damage due to flexing.

COMPARTMENT INTERIOR FINISH

For better interior visibility, to reflect light better, ease of maintenance and prevent the masking of poor welds and questionable workmanship the interior of the body compartments shall remain uncoated.

COMPARTMENT EXTERIOR ROOF FINISH

The top of the compartments shall be brushed stainless steel. The roof shall contain 'Not a Stepping Surface' labeling.

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Complies**

Yes	No
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Aluminum overlay cap walks are unacceptable.

REAR TAILBOARD

A rear tailboard 18" deep shall be provided at the rear from punched & polished stainless steel meeting NFPA 1901 step requirements. The tailboard shall provide protection for the side body compartments and shall provide recessed mounting for the rear ICC marker lights. It shall be bolted to the rear support structure.

CHASSIS FRAME EXTENSIONS

There shall be a rear chassis drop frame extension to provide frame support for the rear of the apparatus body. This extension is to be bolted to the truck chassis as an integral part of the truck frame assembly and is to include crossmember and tailboard reinforcement.

COMPARTMENT DESIGN AND CONSTRUCTION

All compartments shall be manufactured from 12 & 14 gauge stainless steel with the vertical front and rear corner walls from 14-gauge. They shall be of sweep out design and shall be bolted together. Stainless recessed round head bolts and stainless aircraft style "ESNA" nuts shall be applied with proper torque rating for each fastener.

COMPARTMENT VENTILATION

Each compartment shall be provided with a laser cut stainless louver to provide adequate ventilation.

WATER TANK CAPACITY

The water tank shall be "T" shaped, with the upper portion of the tank being wider than the base and shall have a capacity of 2750 US gallons.

OVERFLOW AND VENT PIPE

The fill tower shall be fitted with an integral 6" ID, Schedule 40 PVC combination overflow/vent pipe running from the fill tower through the tank to a 6" coupling mounted into the bottom of the tank to allow water to overflow beneath the chassis.

BODY MODULE CAPACITIES AND HOSEBED HEIGHT

The total of the body module exterior compartments shall be 137 cubic feet.

The total capacity of the body hosebed shall be approximately 65 cubic feet.
The hosebed shall be approximately 76" from the bumper.

The body shall have an overall length of 218" maximum.

LEFT REAR DIRECT TANK FILL

The tank fill shall be fitted with a swing out 1/4 turn 3" valve that is mounted to the tank with the valve exposed on the rear of the apparatus body. The valve shall be equipped with a 30 degree 3" NST female swivel inlet with screen and mounted 48 inches from the ground height.

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Complies**

Yes	No
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A self locking direct control shall be provided on the valve.

One (1) 3" NST Male Rigid to 5" Storz hard coated aluminum adapter shall be provided. (ref. TFT AA2ST-NL)

One (1) 5" Storz cap and chain with a suction gasket shall be provided. (ref. TFT A01ST)

RIGHT REAR DIRECT TANK FILL

The tank fill shall be fitted with a swing out 1/4 turn 2-1/2" valve that is mounted to the tank with the valve exposed on the rear of the apparatus body. The valve shall be equipped with a 30-degree drop 2-1/2" NST female swivel inlet with screen and mounted 48 inches from the ground height.

A self-locking direct control shall be provided on the valve.

One (1) 2-1/2" chrome plated rocker lug plug with chain shall be supplied (ref. Class1 107666).

APPARATUS BODY HOSEBED

The hosebed shall be constructed in such a manner that will prevent damage to fire hose. The hosebed shall comply with the current NFPA requirements. The interior of the hosebed shall be free of projections such as nuts, sharp edges or brackets that may damage hose. The hosebed and walls shall be manufactured from stainless steel. No exceptions to this requirement are allowed.

An aluminum extrusion shall be installed over the rear opening of the hosebed to protect the body from wear. The hosebed bottom shall be fitted with removable slatted, ribbed 6" heavy-duty extruded aluminum floorboards.

ADJUSTABLE HOSE BED DIVIDERS

Two (2) adjustable hosebed dividers shall be provided. Each divider shall be fabricated from .250" thick smooth aluminum plate, 5052-H32 alloy. The rear end of each divider shall have a 3" radius corner and shall be sanded and deburred to prevent damage to hose. There shall be two hand hold openings provided. One (1) at the rear in a vertical position and one (1) approximately 24 inches in from the rear in a horizontal position.

HOSEBED COVER

A black vinyl hosebed cover shall be provided and designed to cover the entire main hosebed area. The cover shall be installed with "stretch cord type" fasteners along each side of the hosebed. A sand filled flap shall be incorporated into the rear edge of the cover. The hosebed cover rear flap shall have a positive locking devices to hold firmly in place.

LEFT SIDE COMPARTMENT DIMENSIONS

FORWARD OF WHEEL WELL

There shall be one (1) low side, rescue style compartment ahead of the rear wheels. It shall have approximate dimensions of 56" wide x 30" high x 24" deep. With one (1) adjustable shelf

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**Bidder
Complies**

Yes	No
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REAR OF WHEEL WELL

There shall be one (1) low side, rescue style compartment behind the rear wheels. It shall have approximate dimensions of 51" wide x 30" high x 24" deep. With one (1) adjustable shelf

HINGED DOOR CONSTRUCTION - LEFT SIDE

All left side compartments shall be provided with hinged doors. The hinged compartment doors shall be flush style so that the entire door fits flush against the apparatus body sides. All doors shall be provided with a high quality, continuous double seal type weather stripping to prevent moisture and dust from entering the exterior compartments. No exceptions are allowed to this requirement.

Each door shall be double pan design with the outer door material being 12 gauge stainless steel with a 1/8" aluminum removable inner liner that shall have a natural finish to provide reflective qualities during night operations.

Vertically hinged and horizontally hinged doors shall have gas shocks. A polished stainless steel 1/4" piano hinge shall be provided for each door.

The exterior of the doors shall be painted to match the main job color.

The left side door latches shall be Hansen slam latches, with a chrome "D" ring with a 5-degree bend for easier grasping of each door handle with gloved hands.

FENDER SIDE SKIRTS

There shall be stainless steel fender side skirts located in the area of the rear wheels. The design of the fender sides shall be a minimal length to provide maximum compartment space in the apparatus.

SIDE DUMP VALVE LOCATION

The dump valves shall be determined at the pre-construction meeting.

DUMP VALVE LEFT SIDE

A minimum of an eight (8) inch diameter air operated dump valve shall be provided and installed on the driver's side of the apparatus body. The dump valve shall include a 14" air operated telescoping chute.

The valve shall be controlled by a switch located in the cab on the driver's side. An additional dump valve control shall be provided at the rear of the apparatus body for the side dump.

DUMP VALVE RIGHT SIDE

A minimum of an eight (8) inch diameter air operated dump valve shall be provided and installed on the passenger's side of the apparatus body. The dump valve shall include a 14" air operated telescoping chute.

The valve shall be controlled by a switch located in the cab on the driver's side. An additional dump valve control shall be provided at the rear of the apparatus body for the side dump.

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**Bidder
Complies**

Yes	No
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REAR QUICK DUMP

A 10" Newton Stainless steel electric operated, quick dump valve shall be installed at the rear center of the water tank. The dump valve shall be controlled by a switch in the cab. The dump valve shall also be operable from the rear of the vehicle by an electric switch.

BODY FENDERS - POLISHED

The apparatus body fenders shall polished stainless steel and shall be rolled, die stamped and fully removable. The stainless steel fenders and stainless fender liners shall be fastened with stainless bolts and ESNA nuts to the outer fender panel.

REAR AXLE MUD FLAPS

Two (2) black, anti-sail, mud flaps shall be mounted behind the rear wheels.

SCBA BOTTLE COMPARTMENTS

Six (6) SCBA bottle tube compartments shall be provided, three (3) in each side rear wheel well area. Each compartment shall be constructed of gray molded storage compartment to provide SCBA scuff protection. A door seal shall be provided at the perimeter of the SCBA compartment. The doors shall be brushed stainless steel with a push button trigger latch.

RIGHT SIDE COMPARTMENT DIMENSIONS

FORWARD OF WHEEL WELL

There shall be one (1) rescue style, full height, and reduced depth compartment ahead of the rear wheels. It shall have approximate dimensions of 56" wide x 63" high x 12" deep in the upper section and 24" deep in the lower section. This compartment shall have 2-12 volt power points mounted in the rear of the compartment. Locations to be determined at preconstruction meeting.

ABOVE WHEEL WELL

There shall be two (2) high side compartments centered over the rear wheels. They shall have approximate dimensions of 52" wide x 33" high x 12" deep.

REAR OF WHEEL WELL

There shall be one (1) rescue style, full height, and reduced depth compartment behind the rear wheels. It shall have approximate dimensions of 51" wide x 63" high x 12" deep in the upper section and 24" deep in the lower section.

HINGED DOOR CONSTRUCTION - RIGHT SIDE

All right side compartments shall be provided with hinged doors. The hinged compartment doors shall be flush style so that the entire door fits flush against the apparatus body sides. All doors shall be provided with a high quality, continuous double seal type weather stripping to prevent moisture and dust from entering the exterior compartments. No exceptions are allowed to this requirement.

Each door shall be double pan design with the outer door material being 12 gauge stainless steel with

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**Bidder
Complies**

Yes	No
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a 1/8" aluminum removable inner liner that shall have a natural finish to provide reflective qualities during night operations.

Both vertically hinged and horizontally hinged doors shall have gas shocks. A polished stainless steel 1/4" piano hinge shall be provided for each door.

The exterior of the doors shall be painted to match the main job color.

The right side door latches shall be Hansen slam latches, with a chrome "D" ring with a 5-degree bend for easier grasping of each door handle with gloved hands.

REAR BODY REFLECTIVE CHEVRON STRIPING

The rear-facing vertical surfaces of the rear taillight panels and the rear body area, visible from the rear of the apparatus, including the rear compartment door, shall be equipped with six (6) inch wide retroreflective striping in a chevron pattern sloping downward and away from the centerline of the vehicle at an angle of 45 degrees.

Each stripe in the chevron shall be a single color alternating between red (3M #-82) and yellow (3M # - 81).

UPPER THRU TANK COMPARTMENT

There shall be a thru tank storage area capable of holding 3 lengths of 6"x 15' hard suction hose, a 24' extension ladder and a 16' roof ladder, a medical backboard, (2) 6' Pike Poles. The layout of this compartment will be decided at the pre-construction meeting.

BODY RUBRAIL - POLISHED STAINLESS STEEL

The apparatus body shall have a bolt on extruded, polished stainless steel rub rail affixed to the side beneath each door area. The rub rail shall provide additional strength and protection and shall be constructed of 3/8" x 1-1/2" stainless steel fastened with stainless steel fasteners. Each rub rail shall be attached to the apparatus body with stand-off spacers made from 1" diameter Polyethylene bar stock.

EXTERIOR COMPARTMENT LIGHTING

A minimum of two (2) compartment lights shall be provided for each body compartment. No exceptions to this requirement. Each body door shall have an automatic compartment light switch.

REAR WORK LIGHTS

Two (2) recess mounted area work lamps shall be provided above the tailboard, one (1) each side on the inner face of the beavertail. The lights shall be shall be automatically switched on when the parking brake is set.

UNDERBODY LIGHTING

Underbody ground lights shall be provided under the apparatus body as required NFPA 1901. Four (4) Truck-Lite model #60 ground lights shall be provided at the rear of the apparatus body, two (2) each side, to illuminate under the rear compartments.

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Complies**

Yes	No
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There shall also be two (2) model #40 ground lights provided at the outer front corners of the apparatus body, one (1) each side, to illuminate the area under the forward compartments and pump panel areas. All underbody ground lights shall be switched on when the parking brake is set and the master battery switch in the "ON" position. Additionally, the underbody lights shall come on to supplement the back-up lights when the transmission is placed into reverse.

FOLDING STEPS

Folding steps shall be provided on the front and rear of the apparatus body. Steps shall be provided and installed per NFPA requirements.

INTERMEDIATE REAR STEP - UPPER FULL WIDTH

An NFPA #1901 step compliant punched stainless steel rear step shall be located in the area of the rear compartment and span the width of the hosebed. It shall be no less than 8" in depth

INTERMEDIATE REAR STEPS - LOWER

Two (2) rear corner steps, one (1) each side, shall be located adjacent to the rear compartment and shall be no less than 8" in depth and fabricated of Punched stainless steel to meet NFPA #1901 step requirements.

REAR HANDRAILS

Three (3) ribbed, solid stock 1-1/4" diameter, aluminum handrails with chrome plated stanchions shall be supplied and installed at rear of the apparatus body. There shall be two (2) 24" long vertical handrails installed, one (1) each side on the inside of the rear area of the body and one (1) 69" long handrail installed horizontally along the upper edge of the beavertail area.

HOSEBED ACCESS LADDER

A Zico ladder shall be provided on the rear of the apparatus body to provide access to the hosebed. The ladder shall be mounted on the left side of the rear of the body and shall include a swing down section for easier access from the ground.

PORTABLE TANK STORAGE

An electric portable tank storage rack shall be installed on the left side of the apparatus body to provide folding tank storage above the side compartments.

The Ziamatic "Quic-Lift" tank rack assembly, location to be determined at the pre-construction meeting. A weatherproof control switch provided on the left side pump panel in full view of the rack.

FOLDING TANK RACK COVER

An aluminum cover shall be fabricated for the Zico folding tank rack. The cover shall enclose the top and outer exposed side of the folding tank rack .The cover shall be painted to match the color of the apparatus.

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**Bidder
Complies**

Yes	No
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FOLDING TANK

Note: the department will supply a new portable 3000 US gallon Fol-Da-Tank brand, model FDTA-3000-ALUM,

HOSEBED FLOODLIGHT

One (1) Unity AG hosebed floodlight shall be mounted at the front right corner of the hosebed. The light shall be controlled from a water proof switch on the lamp head.

BODY SIDE SCENE LIGHTS

There shall be body side scene lights installed as high as possible and spread out as far as possible on both sides of the apparatus body.

There shall be Four (4) Whelen Pioneer Series model PFA2 LED floodlight lamphead(s) provided.

The scene light(s) shall be mounted with a stainless steel housing. The housing shall protect the light from the top and the two sides and shall incorporate a pivot mounting to allow the light to be adjusted inside the housing. The scene lights shall be operated by a switch located in the driver's area of the cab.

Additionally the (2) most rear lights shall come on when the transmission is placed in reverse.

BODY REAR SCENE LIGHTS

There shall be rear scene lights installed as high as possible on both sides of the rear of the apparatus body.

The lighting positions shall have two (2) Whelen M6ZC white LED Scene lights mounted on Whelen M6P15C 15° angled bright finished housings.

The rear scene lights shall be operated by a switch located beneath the left rear step. If the scene light is left in the 'ON' position the lights shall automatically turn off when the truck's parking brake is released. There shall also be a switch in the driver's area to turn on the rear scene lights.

Additionally, the rear scene lights shall come on to supplement the back-up lights when the transmission is placed into reverse.

ALUMINUM TRAYS - PULL OUT

Two (2) heavy duty pullout trays shall be installed and shall be equipped with stainless slides and a gas shock to hold the tray in both the in and out positions and shall be made from 3/16" aluminum with a maximum capacity of 250 pounds.

Each heavy duty pullout tray shall be installed as follows:

Exact location to be determined at preconstruction conference

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Yes	No		

DRI-DEK MATTING - SHELVES/TRAYS & COMPARTMENTS

All compartments and trays shall be covered with Dri-Dek mat for improved ventilation that shall also provide a non-slip surface.

The Dri-Dek mat shall be black in color. Exposed compartment edges shall include a yellow tapered edging.

ALUMINUM TOOL BOARDS

The upper half of the rear wall of four (4) exterior compartments shall be covered with aluminum extrusion tool mounting board the board must be capable of being used without the need of vendor specific fasteners to hold equipment mounts in place.

Tool mounting boards shall be installed on the upper back wall of R1, R2, R3, R4 compartments.

APPARATUS BODY ELECTRICAL SYSTEM

All body electrical shall conform to NFPA 1901 latest edition standards. The apparatus shall be equipped with a heavy-duty 12-volt negative ground system.

All 12-volt apparatus wiring shall pass through a heavy duty power disconnect solenoid. The 12-volt control of the power disconnect switch is to be triggered by the Master Battery Disconnect.

The apparatus shall be equipped with a Class1 Es-Key Management System for complete control of the electrical system devices.

All Eskey wiring shall be color-coded and function coded to assist the technician in servicing the electrical system. All circuits shall be divided and balanced for proper load distribution. Wiring shall be routed in looms as a single harness. Heat resistant convoluted loom shall be used. Only solderless, weatherproof insulated crimp automotive electrical connectors shall be used.

APPARATUS ICC MARKER LIGHTING

Two (2) amber Whelen OS Series LED side clearance lights shall be supplied, one (1) each side mounted ahead of the forward body compartment. These lights are to be mounted in a chrome flange.

Five (5) red LED clearance lights shall be supplied, mounted in the rear of the apparatus.

Two (2) red LED clearance lights shall be supplied, mounted facing the side of the apparatus. ICC lighting utilized and lighting positions shall be in conformance with FMVSS.

FRONT CORNER POLE MOUNTED GUIDE LIGHTS

Two (2) amber lights on chrome posts shall be provided mounted one each side on the front bumper of the vehicle.

REAR STOP/TAIL/TURN/BACKUP LIGHTS

The rear of the apparatus shall be equipped with Federal Signal QuadraFlare 6"x4" lights. The top light in the assembly shall be a red LED stop/tail light, Federal Signal model QL64Z-BTT. The middle

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**Bidder
Complies**

Yes	No
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light set shall be an amber LED lamp with a populated arrow shape, Federal Signal model QL64Z-ARROW and the lower lights shall be clear LED backup lights, Federal Signal model QL64Z-BACKUP.

A one-piece polished aluminum trim casting shall be mounted around the rear stop/tail/turn and backup lights on each side of the apparatus.

SIDE MOUNTED TURN SIGNAL LIGHTS

Two (2) Whelen, model RSA02ZCR, linear amber LED turn signal lights shall be provided mounted one each side in the rear wheel well area. The lights shall be mounted in a chrome flange.

BACK-UP ALARM

A solid state electronic backup alarm shall be installed on the rear of the apparatus and wired to the backup light circuit.

One (1) license plate mounting bracket and incandescent light shall be provided. The light and bracket shall be located on the rear of the apparatus.

CAB FORWARD ROOF MOUNTED LIGHTBAR

One (1) PowerArc, Volt Series, model VM7006-Q13-4P, 70" light bar shall be mounted on the cab roof.

The light bar shall contain 12 light positions. The light bar shall be equipped as follows, numbered from the driver's side to the officer's:

Position 1 - Driver's side facing – One (1) LED M90 pod with red lens

Position 2 – Driver's side 45° facing – One (1) LED M90 pod with red lens

Position 3 – Driver's side forward facing – One (1) LED M90 pod with red lens

Position 4 – One (1) **FRC Q13 with warning light flasher in response mode**

Position 5 – One (1) LED M90 pod with red lens

Position 6 – One (1) LED M90 pod red lens

Position 7 – One (1) LED M90 pod red lens

Position 8 - One (1) LED M90 pod with red lens

Position 9 - One (1) **FRC Q13 with warning light flasher in response mode**

Position 10 - Officer's side forward facing – One (1) LED M90 pod with red lens

Position 11 - Officer's side 45° facing – One (1) LED M90 pod with red lens

Position 12 – Officer's side facing – One (1) LED M90 pod with red lens

This light bar shall fulfill the requirements for Upper Zone A and in combination with the upper rear warning devices fulfills the requirements for Upper Zones B, C, and D. Any clear warning light(s) in the light bar shall be disabled automatically for the "Blocking Right of Way" mode.

3-M OPTICOM SYSTEM

The department shall provide a OPTICOM priority control system for installation on this light bar
A separate switch shall be mounted in the cab for use by the driver.

The OPTICOM shall be wired to be deactivated when the parking brakes are applied.

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**Bidder
Complies**

Yes	No
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LOW LEVEL WARNING LIGHTS

Two (2) Whelen warning lights, 600 Series, Super-LED light heads shall be mounted in the front grille each with a Whelen chrome plated flange. These lights shall be separated as far as practical one on each side.

The warning lights shall be programmed for Hi-power with the same flash pattern for both the right and left light head.

Both warning light lenses shall be red in color.

FRONT INTERSECTION LIGHTS

Two (2) Whelen warning lights, 600 Series, Super-LED light heads shall be mounted one (1) on each side of the hood with a Whelen chrome plated flange.

The warning lights shall be programmed for Hi-power with the same flash pattern for both the right and left intersection light head.

Both warning light lenses shall be red in color.

BODY SIDE WARNING LIGHTS

Two (2) Whelen warning lights, 600 Series, Super-LED light heads shall be mounted one (1) on each side of the body over the rear wheel with a Whelen chrome plated flange.

The warning lights shall be programmed for Hi-power with the same flash pattern for both the right and left intersection light head.

Both warning light lenses shall be red in color.

REAR UPPER LEVEL WARNING LIGHTS

Two (2) PowerArc warning lights, model LEDB210 beacons, shall be mounted on the rear of the apparatus one on each side of the hosebed on polished stainless steel stanchions.

REAR LOWER LEVEL WARNING LIGHTS

Two (2) Whelen warning lights, 600 Series, Super-LED light heads shall be mounted on the rear of the apparatus below the taillights at the lower outermost corners in vertical position with a Whelen chrome plated flange.

The warning lights shall be programmed for Hi-power with the same flash pattern for both the right and left intersection light head.

Both warning light lenses shall be red in color.

IDENTIFICATION AND SAFETY LABELS

A permanent plate/s shall be installed in the driver's compartment to specify the quantity and type of all of the following:

Fluids
Filters

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**Bidder
Complies**

Yes	No
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Belts

Brake P/N(chambers, ASA's, Shoes, Drums)
 Model & Serial #'s, Engine, Transmission, Axles, Pump

A permanent plate with pump performance data and serial numbers shall be installed on the pump panel.

A permanent plate shall be installed in the driver's compartment specifying the maximum number of personnel the vehicle is designed to carry per NFPA standards. It shall be located in an area visible to the driver.

An accident prevention sign stating "DANGER PERSONNEL MUST BE SEATED AND SEAT BELTS MUST BE FASTENED WHILE VEHICLE IS IN MOTION OR DEATH OR SERIOUS INJURY MAY RESULT" shall be placed so it is visible from all seating positions.

An accident prevention sign stating "DANGER DO NOT RIDE ON REAR STEP WHILE VEHICLE IS IN MOTION, DEATH OR SERIOUS INJURY MAY RESULT" shall be placed so it is visible from the rear step of the vehicle.

WHEEL CHOCKS

One (1) pair of heavy duty, high tensile molded aluminum wheel chocks measuring 7.75" high x 8.5 wide x 15" long shall be provided with the apparatus. The wheel chocks shall have a bright yellow powder coat finish for high visibility, safety and corrosion resistance. No exception shall be allowed to these requirements.

Two Stainless steel chock holders shall be provided and mounted on the left side of the apparatus below the front body compartment.

HARD SUCTION HOSE

Two (2) 15' long x 6" diameter TFT lightweight PVC flexible suction hose shall be provided. The hard suction hose shall be equipped with a long handle female end and rocker lug male end couplings.

REFLECTIVE SAFETY STRIPE

A 1" x 6" x 1" wide 3M brand Scotchlite reflective stripe shall be affixed to the perimeter of the vehicle. The striping shall be placed up to 60" above ground level and shall conform to NFPA reflectivity requirements. At least 60% of the perimeter length of each side and width of the rear, and at least 25% of the perimeter width of the front of the vehicle shall have reflective stripe.

REFLECTIVE STRIPE COLOR

The apparatus 6" body striping shall be black reflective.
 The 1" accent stripe(s) shall be gold reflective.

MISCELLANEOUS

There is included within this proposal a lettering allowance of \$1500.00 for lettering as directed by the Fire Department.

There shall be included within this proposal a \$5,000.00 new equipment / equipment mounting allowance to be expended as directed by the fire department.

Hooksett Fire –Rescue Department
Specifications for Stainless Steel Pumper Tanker Bid # 11-05

**Bidder
Complies**

Yes	No
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SHIPPING OF COMPLETED APPARATUS

The completed apparatus shall be driven from the factory to the dealer's location by the dealer

APPARATUS PRE-DELIVERY

The Apparatus shall receive a predelivery check over, systems check & cleaning prior to final delivery to the department. This service will be completed by the dealer.

FINAL DELIVERY

The Apparatus once pre-delivery check & cleaning has been completed shall be delivered to the Hooksett Fire Department

SERVICE

As genuine and qualified service is of the utmost importance the Fire Department the dealer shall own and provide the following as a minimum the following service. Further the department expects to make a single call to the dealer for all warranty issues, items that are covered under separate warranties (ie: chassis) shall be managed by the dealer **NO EXCEPTIONS**

Dealerships that do not own their own service center and rely on third parties shall not be considered and the bid shall be rejected.

The Service center shall have/be the following as a minimum:

- * Shall have been in the fire apparatus service & repair business for a minimum of 10 years
- * The founders of the service company shall be actively engaged in the firefighting industry for a minimum of 10 years
- * Shall have Factory trained technicians that have been factory trained by the OEM for completing service to this vehicle.
- * Shall have an ongoing EVT certification and training program certificates of regular testing and achievements shall be included in the proposal for all technicians to ensure that qualified service will be available regardless of the tech that is employed. EVT certificates that are expired shall not be considered as viable.
- * The ability to complete major or minor repairs to the apparatus
- * Shall have a fully stocked parts room
- * Service center shall have road service capability and warranty work shall be completed at the Hooksett Fire Department whenever possible
- * Shall maintain adequate insurance to protect our apparatus with aggregate limits of not less than Two Million Dollars
- * Shall be available to the department 24/7 and maintain an on call tech for after-hours response
- * Shall have a working knowledge of the department's equipment already in-service and be prepared

Hooksett Fire –Rescue Department
Specifications for Stainless Steel Pumper Tanker Bid # 11-05

**Bidder
Complies**

Yes No

to answer technical question relating to the differences in the apparatus.

- * Shall have the ability to complete chassis, pump testing, aerial service work on all of our apparatus if required.
- * Shall have the capability to complete service on multiplex electrical systems at the OEM level.
- * Shall be no farther than 100 road miles from the Hooksett Legends drive station

Hooksett Fire –Rescue Department Specifications for Stainless Steel Pumper Tanker		Bid # 11-05	Bidder Complies
Yes	No		

Bid Form

It is the intention of the Town of Hooksett to purchase a new Stainless Steel Pumper Tanker.
Price should include delivery FOB Hooksett, NH 03106.

New Vehicle Cost \$_____

Trade in Vehicle value \$_____

Total Vehicle Delivered \$_____

Approximate Delivery Date _____

Hooksett Fire –Rescue Department Specifications for Stainless Steel Pumper Tanker		Bidder Complies
Bid # 11-05	Yes	No

Trade In Vehicle

1991 Emergency One Tanker-Pumper

International 4900 series 4 x 2 chassis

Powered by a International 466 DT/DTA diesel engine with automatic transmission.

1250 GPM Hale pump with the following:

- 2- 1 ½ inch cross lays pre-connect
 - 2- Right side and left side pump panel 2 ½ inch discharges
 - 1- Rear hose bed 2 ½ inch pre-connect
 - 1- 6 inch Gated front suction
 - 1- 8 inch electric rear dump valve with extendable chute
 - 1- 2 ½ gated rear direct tank fill.
- 1- 1500-2500 gallon Porta-tank compartment

Mileage: 52,551

Hours: 3,710



Hooksett Fire –Rescue Department
Specifications for Stainless Steel Pumper Tanker Bid # 11-05

**Bidder
Complies**

Yes No

SPECIFICATIONS RECEIPT

Company Name: _____

Date Received: _____

Name of Individual: _____

Signature: _____

Please return:

By Mail:

Town Administrator
35 Main Street
Hooksett, NH 03106